AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1. - 19. (Cancelled)

20. (Currently Amended) A medical device comprising

a plurality of surface capillary fibers associated with at least a portion of a surface of the device, the surface capillary fibers comprising a polymer, and

a quantity of bioactive agent ~~associated with~~ pre-loaded and in association with the surface capillary [[fiber]] fibers,

wherein the bioactive agent elutes in a controlled way from the [[fiber]] fibers when the surface capillary ~~fiber is contacting~~ fibers are in contact with a patient's body fluids/tissue,

wherein each of the surface capillary [[fiber]] fibers comprises [[a]] at least one capillary along its outer surface running along at least a portion of the length of the surface capillary fiber, and

wherein the medical device is a percutaneous device or an implantable device.

21. (Original) The medical device of claim 20 wherein the bioactive agent is selected from a group consisting of an anti-microbial agent, a thrombolytic agent, an anti-platelet agent, an anti-coagulation agent, a growth factor or a combination thereof.

22. (Original) The medical device of claim 20 wherein the bioactive agent comprises a thrombolytic agent.

23. (Previously Presented) The medical device of claim 20 wherein the bioactive agent comprises tissue plasminogen activator.

24. (Original) The medical article of claim 20 wherein the bioactive agent comprises an anti-microbial agent.

25. (Currently Amended) The medical device of claim 20 wherein each of the surface capillary [[fiber]] fibers has a surface area of at least about a factor of 1.5 greater than a corresponding circular fiber with an equivalent diameter.

26. (Original) The medical device of claim 20 wherein the device is configured for placement within a blood vessel without blocking flow through the vessel.

27. (Previously Presented) The medical device of claim 20 wherein the device comprises a catheter and additional surface capillary fibers, wherein the additional surface capillary fibers are associated with the inner surface of the catheter.

28. (Currently Amended) A tubular medical device comprising a tubular substrate having a wall with an interior surface and an exterior surface and a plurality of surface capillary fibers associated with at least a portion of one of the surfaces with an adhesive, ~~mechanical binding,~~ heat bonding, or chemical bonding, the surface capillary fibers having lengths from about 500 microns to about 10 centimeters,

wherein each of the surface capillary [[fiber]] fibers comprises [[a]] at least one capillary along its outer surface running along at least a portion of the length of the surface capillary with capillary widths ranging from about 1 micron to about 200 microns.

29. (Original) The tubular medical device of claim 28 wherein the device comprises a catheter configured for placement within a vessel of a patient.

30. (Original) The tubular medical device of claim 29 wherein the catheter is a microcatheter.

31. (Previously Presented) The tubular medical device of claim 28 wherein the surface capillary fibers are associated with a bioactive agent.

32. (Original) The tubular medical device of claim 31 wherein the bioactive agent comprises heparin sulfate.

33. (Previously Presented) The tubular medical device of claim 28 wherein at least one of the surface capillary fibers is associated with at least a portion of the interior surface.

34. (Currently Amended) A medical device comprising a non-porous surface at least a portion of which is covered with surface capillary fibers,

wherein the non-porous surface is contoured to match a portion of a tissue structure within a patient,

wherein each of the surface capillary [[fiber]] fibers comprises [[a]] at least one capillary along its outer surface running along at least a portion of the length of the surface capillary fiber, and

wherein the medical device is an implantable device.

35. (Original) The medical device of claim 34 wherein the non-porous surface comprises a polymer.

36. (Cancelled)

37. (Previously Presented) The medical device of claim 34 wherein the surface capillary fibers are associated with a bioactive agent.

38. - 46. (Cancelled)

47. (Currently Amended) A method for delivering a bioactive agent using a medical device, the method comprising

contacting a patient's body fluids/tissues with a plurality of surface capillary fibers associated with at least a portion of a surface of the device, wherein the surface capillary fibers are pre-loaded and in association with a bioactive agent that elutes in a controlled way from the fibers upon contacting the fluids/tissues,

wherein each of the surface capillary [[fiber]] fibers comprises [[a]] at least one capillary along its outer surface running along at least a portion of the length of the surface capillary fiber,

~~wherein the capillaries of the fibers are associated with a bioactive agent that elutes in a controlled way from the fibers,~~ and

wherein the medical device is a percutaneous device or an implantable device.

48. (Withdrawn, Previously Presented) The method of claim 47 wherein contacting of the patient's fluids/tissue comprises implanting a prosthetic device comprising the surface capillary fibers.

49. (Previously Presented) The method of claim 47 wherein contacting of the patient's fluids/tissue comprises delivery of a catheter associated with the surface capillary fibers.

50. (Currently Amended) The method of claim 49 wherein the catheter comprises a lumen and the surface capillary fibers are associated with the ~~interior~~ lumen of the catheter.

51. (Withdrawn, Previously Presented) The method of claim 49 wherein the surface capillary fibers are associated with a medical device that is delivered through the catheter.

52. (Original) The method of claim 47 wherein the bioactive agent is selected from the group consisting of a thrombolytic agent, an anti-platelet agent, an anti-coagulation agent, a growth factor or a combination thereof.

53. (Previously Presented) The medical device of claim 20 wherein the bioactive agent is associated with a controlled release agent.

54. (Previously Presented) The medical device of claim 20 wherein the plurality of surface capillary fibers are associated with at least a portion of a surface of the device with an adhesive, mechanical binding, heat bonding, or chemical bonding.

55. (Previously Presented) The medical device of claim 47 wherein the plurality of surface capillary fibers are associated with at least a portion of a surface of the device with an adhesive, mechanical binding, heat bonding, or chemical bonding.

Please add new claims 56 and 57 as follows:

56. (New) The medical device of claim 20 wherein the bioactive agent is pre-loaded into the capillaries of the surface capillary fibers with a control release agent.

57. (New) The medical device of claim 20 wherein the surface capillary fibers comprises a polymer and the bioactive agent is pre-loaded into the polymer of the surface capillary fibers.